

CULPEPER ENGINEERING, P.C.
P.O. BOX 733
LOCUST GROVE, VIRGINIA 22508
PHONE: 540 423-9706
FAX: 540 423-1534



September 9, 2011

Anna Westernik
Dept. of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193

Re: Reissuance Locust Grove Town Center
VA0091961

Dear Ms. Westernik,

Enclosed are the required signed forms for the reissuance of Locust Grove Town Center's VPDES, VA0091961. In accordance with your reissuance reminder letter, the provided forms include: Form 2A, the VPDES Application Addendum and the Sludge Application Form. A copy of the Public Notice Billing Form has also been provided. The necessary topographic maps and plant diagrams (per Sludge Application) are included.

I have provided all of the completed forms on a CD as you requested. If you have any questions or concerns with the provided forms and support documentation, please do not hesitate to contact me or the Dotson's.

Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read "Rebecca S. Tolliver".

Rebecca S. Tolliver

cc: Kenneth & Lora Dotson

CULPEPER ENGINEERING, P.C.
P.O. BOX 733
LOCUST GROVE, VIRGINIA 22508
PHONE: 540 423-9706
FAX: 540 423-1534

October 13, 2011

Anna Westernik
Department of Environmental Quality
13901 Crown Court
Woodbridge, VA 22193

RECEIVED
OCT 13 2011
DEQ-NRO

Re: Locust Grove Town Center Permit Reissuance – VA0091961

Dear Ms. Westernik,

In response to your emailed comments to Kenneth and Lora Dotson regarding the submitted application for reissuance of the LGTC VPDES Permit, the following information is provided.

1. You indicated that the permit addendum form states that all flow is from domestic connections and noted that there are small industrial users present such as restaurants. You noted that this is a mixed flow from domestic and commercial connections and asked if an estimate of “how much flow can be considered sewage and how much wastewater” could be provided.

As noted on the form, the facility serves a commercial operation which includes a convenience store, offices, stores, churches and restaurants. There are no “industrial” users which generate wastewater flows that would be characterized as significant industrial users. The users are commercial establishments and all of the flows are generated from bathroom facilities located in the commercial establishments and any routine cleaning of establishments and/or flows associated with food preparation, dishwashing and routine cleaning/management of a restaurant facility. The generated waste water is mixed flow from commercial establishments and may generally be characterized as bathroom/kitchen and cleaning waste flows. The form has been revised to note there are no dwelling units served.

The generated flows are from uses that are similar in nature to domestic uses (bathroom/cooking/cleaning), however there is no showering to provide dilution. The strength may be higher than normal domestic waste; however, the waste constituents are

characterized as commercial flows not industrial uses. There are no industrial activities at the site.

You requested an estimation of “sewage flow” and “wastewater flow”. It is assumed you are asking for a breakdown of bathroom waste vs. other (primarily restaurant) waste. This detailed breakdown of waste source generation is not monitored. It may be assumed that numerous establishments (stores/offices/other non-restaurant establishments) are primarily generators of bathroom waste. The convenience store includes a deli counter for take-out food and has public bathrooms; and the restaurants are mixed use (bathroom use and kitchen use). Assuming 50% of water use at the site is restaurant demand which is mixed (bathroom & kitchen) flow, an estimation of the % of restaurant flow generation which is bathroom waste volume as opposed to kitchen waste volume is estimated to be 50%. This is an estimation based on broad assumptions of activity and does not represent any actual flow monitoring. Basically this assumption would indicate 25% of the waste stream may be other than bathroom waste associated with commercial kitchens .

2. The bacteriological results summary is provided. The results are from submitted DMRs. The reported result on the DMRs were averaged. The “units” has been revised on sheet 6 of 21 to indicate “N/100 ml” rather than geometric mean. An average of the reported results was provided as the average value with all “<” results used as the reported value (if a <1 was reported, 1 was used for averaging). The maximum reported result was identified as the maximum observed report. The summary provides the reported result and the values assumed for averaging. The number of samples has been changed to 25.

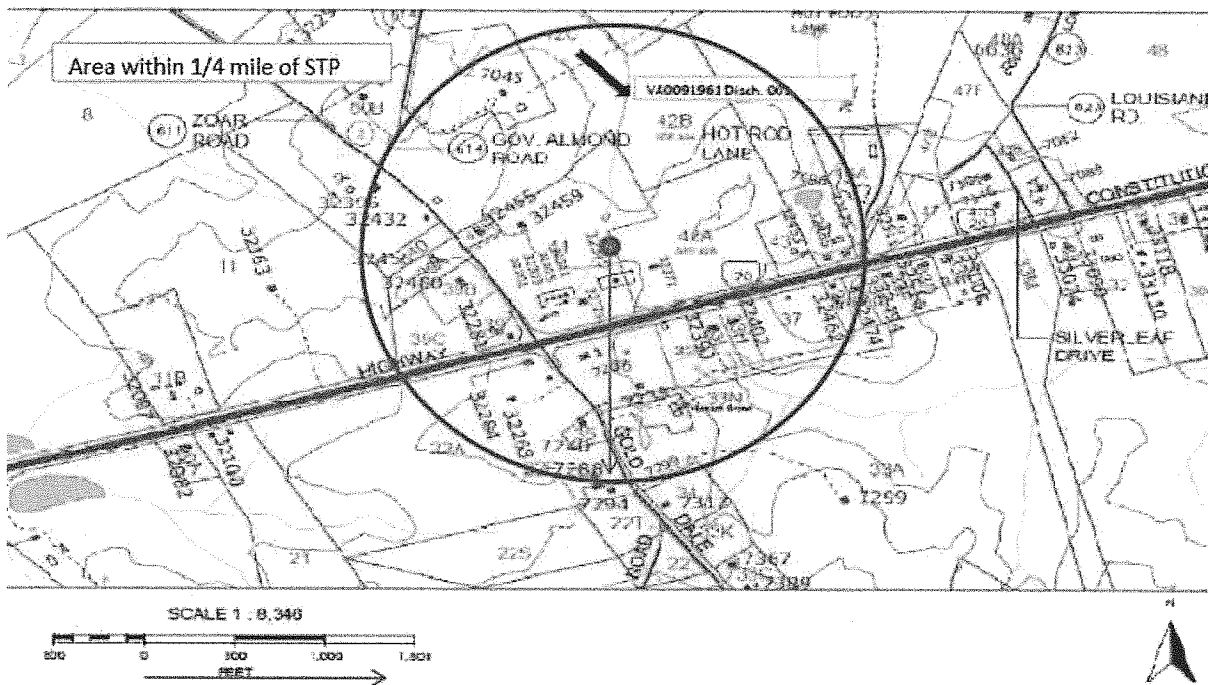
LOCUST GROVE TOWN CENTER E-Coli

Year	Month	Result	Value for Averaging	# Monthly Results
2010	June	8.1	8.1	3
	July	23.5	23.5	2
	August	<1.7	1.7	2
	September	<1	1	2
	October	20.8	20.8	2
	December	7.9	7.9	2
2011	Jan	<1	1	2
	Feb	<7.3	7.3	2
	March	<1	1	2
	April	5	5	2
	May	<3.2	3.2	2
	June	2.2	2.2	2
Average			6.89	
Max			23.5	
Total samples				25

3. The time frame used for reporting average BOD and TSS results was June 2010 – July 2011. A summary is provided. The form has been corrected for averaging of BOD results. Per the permit “<QL” values have been averaged as 0. The reported QL had previously been used. The max TSS reported has been corrected as the max average was previously reported. A summary is provided.

		Locust Grove Town Center				
		cBOD	cBOD for	cBOD	TSS	TSS
		Avg	Averaging	Max	Avg	Max
2010	June	<2	0	<2	5.5	5.5
	July	<QL	0	<QL	4.4	4.4
	August	2	2	2	1.6	1.6
	September	<2	0	<2	7.1	7.1
	October	<2	0	<2	4.1	4.1
	December	<QL	0	<QL	1.7	1.7
2011	Jan	8	8	8	9.6	9.6
	Feb	9	9	9	8.8	8.8
	March	2	2	2	3.8	3.8
	April	5	5	5	10	19
	May	10	10	10	13.3	25
	June	<QL	0	<QL	1.9	1.9
Average			3		6.0	
Max				10		25

4. The tax map attachment was provided to show adjacent/local parcels. It is assumed that all locations indicating a structure are provided with a well. The provided map (tax map) was presented as the available public record which identifies properties that may have a well. The only onsite well was identified on the provided aerial map. Below is a copy of the provided tax map with the area within ¼ mile of the plant (~1,320') identified. A copy (PDF) is also attached.



5. The DMT was determined based on pump out information provided by the owner. As noted in the application, the facility removes approximately 3,000 gallons from the site quarterly. Assuming 12,000 gallons per year, a DMT value was estimated to be 0.5 DMT annually. The 12,000 gallons would be a wet tonnage of 50 WT/yr. The material is from the septic tanks, contact tank and plants. A concentration of 1% was assumed. This value is conservative as 1% may be higher than the actual concentration of removed material. As an additional measure, conversion from DT (0.5 DT/Yr) to DMT which would result in a DMT value of 0.45 DMT was rounded to 0.5. DMT. The conservative estimate of removed material allows for additional pumping as required.

As noted above the following attachments are provided for your use:

1. Revised permit addendum;
2. Revised page 6 of Form 2A;
3. Tax map showing $\frac{1}{4}$ mile from STP.

If you have any additional questions, or require any additional information please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Rebecca S. Tolliver".

Rebecca S. Tolliver, P.E.

cc: Kenneth & Lora Dotson

VPDES PERMIT APPLICATION ADDENDUM

1. Entity to whom permit is to be issued: Kenneth & Lora Dotson
Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.
2. Is this facility located within city or town boundaries? Yes ☐ No ☒
3. Please provide the tax map parcel number for the land where the discharge is located: T.M. 22-42B Orange Co.
4. What is the design average flow of this facility in million gallons per day (MGD)? 0.0045 MGD
5. In addition to the design flow, should the permit be written with limits for any other discharge flow tiers? Yes
If yes, please identify the other flow tiers in MGD: 0.010 MGD & 0.020 MGD
Please consider such issues as if you plan to expand operations during the next five years or if your facility's flow is considerably greater than your current flow?
6. Nature of operations generating wastewater: Commercial development (retail/office/service – restaurant). There are no dwelling units served by the facility

 % of flow from domestic connections/sources There are no dwelling units served by the facility

100 % of flow from non-domestic connections/sources - All flows are from a commercial development (retail/office/service/restaurants). Generated wastes are from facility bathrooms; commercial kitchens and cleaning operations associated with the commercial establishments.
7. Mode of discharge: X Continuous ☐ Intermittent ☐ Seasonal ☐
Describe frequency and duration of intermittent and seasonal discharges: NA
8. Identify the characteristics of the receiving stream at the point just above

Stream Characteristics	Outfall Number						
	001						
Never dry, permanent stream							
Usually flowing, sometimes dry, intermittent stream	X						
Wet-weather flow, often dry, ephemeral stream							
Usually or always dry, effluent- dependant stream							
Lake or pond at or below discharge point							
Other:							

NOTE: Stream appears to be spring fed. This proposed discharge to an UT to Flat Run and is approximately 2 miles above the Lake of the Woods Lake.

9. Approval date(s) if applicable:
O & M Manual : 12-17-10 Sludge/Solids Management Plan 12-17-10 Sludge application provided
Have there been changes in your operation or procedures since the above approval dates? Yes ☐ No ☒
Approved Manual included relocation of alum feed point & included management plan for Sludge/Solids handling.

RECEIVED
OCT 13 2011
DEQ-NRO

Disclaimer

This is an updated PDF document that allows you to type your information directly into the form and to save the completed form. This form is the most updated form currently available.

Note: This form can be viewed and saved only using Adobe Acrobat Reader version 7.0 or higher, or if you have the full Adobe Professional version.

Instructions:

1. Type in your information
2. Save file (if desired)
3. Print the completed form
4. Sign and date the printed copy
5. Mail it to the directed contact.

FORM
2A
NPDES

NPDES FORM 2A APPLICATION OVERVIEW

APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

- A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.
- B. **Additional Application Information for Applicants with a Design Flow \geq 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.
- C. **Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

- D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):
 - 1. Has a design flow rate greater than or equal to 1 mgd,
 - 2. Is required to have a pretreatment program (or has one in place), or
 - 3. Is otherwise required by the permitting authority to provide the information.
- E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):
 - 1. Has a design flow rate greater than or equal to 1 mgd,
 - 2. Is required to have a pretreatment program (or has one in place), or
 - 3. Is otherwise required by the permitting authority to submit results of toxicity testing.
- F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:
 - 1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
 - 2. Any other industrial user that:
 - a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
 - b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
 - c. Is designated as an SIU by the control authority.
- G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

FACILITY NAME AND PERMIT NUMBER:
Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name Locust Grove Town Center STP

Mailing Address 33225 Constitution Hwy., Locust Grove, VA 22508

Contact person Kenneth & Lora Dotson

Title Owners

Telephone number (540) 840-5335

Facility Address 32301 Constitution Hwy., Locust Grove, VA 22508
(not P.O. Box)

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name Same

Mailing Address

Contact person

Title

Telephone number

Is the applicant the owner or operator (or both) of the treatment works?

☒ owner ☐ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

☐ facility ☒ applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES VA0091961

PSD

UIC

Other Public Water System - PWSID# 6137003

RCRA

Other

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
<u>Locust Grove Town Ctr.</u>	<u>400</u>	<u>Separate</u>	<u>Private</u>
<u></u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>
Total population served <u>400</u>			

Locust Grove Town Center STP - VA0091961

A.5. Indian Country.

- Yes ☐ No ☒

- _____ Yes ☒ No

a. Design flow rate 0.0045 mgd

	<u>Two Years Ago</u>	<u>Last Year</u>	<u>This Year</u>	
b. Annual average daily flow rate	<u>0.0019</u>	<u>0.0019</u>	<u>0.0020</u>	mgd
c. Maximum daily flow rate	<u>0.0030</u>	<u>0.0057</u>	<u>0.0050</u>	mgd

<input checked="" type="checkbox"/>	Separate sanitary sewer	100 %
<input type="checkbox"/>	Combined storm and sanitary sewer	%

a. Does the treatment works discharge effluent to waters of the U.S.? ☒ Yes ☐ No

i. Discharges of treated effluent	<u>1</u>
ii. Discharges of untreated or partially treated effluent	<u>0</u>
iii. Combined sewer overflow points	<u>0</u>
iv. Constructed emergency overflows (prior to the headworks)	<u>0</u>
v. Other _____	<u>0</u>

- Location: _____

Is discharge _____ continuous or _____ intermittent?

- Location: _____

Number of acres: _____

Annual average daily volume applied to site: Mgpd

Is land application continuous or intermittent?

- d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? Yes ☒ No ☐

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide:

Transporter name: _____

Mailing Address: _____

Contact person: _____

Title: _____

Telephone number: _____

For each treatment works that receives this discharge, provide the following:

Name: _____

Mailing Address: _____

Contact person: _____

Title: _____

Telephone number: _____

If known, provide the NPDES permit number of the treatment works that receives this discharge. _____

Provide the average daily flow rate from the treatment works into the receiving facility. _____

mgd

- e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)?

_____ Yes



No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method: _____

Is disposal through this method _____

continuous or _____

intermittent?

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

- a. Outfall number 001
- b. Location Locust Grove, VA 22508
(City or town, if applicable) (Zip Code)
Orange VA
(County) (State)
38N 18 36 77W 48 30
(Latitude) (Longitude)
- c. Distance from shore (if applicable) 0 ft.
- d. Depth below surface (if applicable) 0 ft.
- e. Average daily flow rate 0.002 mgd
- f. Does this outfall have either an intermittent or a periodic discharge?
 Yes ✓ No (go to A.9.g.)
- If yes, provide the following information:
- Number of times per year discharge occurs:
- Average duration of each discharge:
- Average flow per discharge: mgd
- Months in which discharge occurs:
- g. Is outfall equipped with a diffuser? Yes ✓ No

A.10. Description of Receiving Waters.

- a. Name of receiving water UT Flat Run
- b. Name of watershed (if known) Rappahannock
United States Soil Conservation Service 14-digit watershed code (if known): Unknown
- c. Name of State Management/River Basin (if known): Upper Rappahannock
United States Geological Survey 8-digit hydrologic cataloging unit code (if known): 02080103
- d. Critical low flow of receiving stream (if applicable):
acute 0 cfs chronic 0 cfs
- e. Total hardness of receiving stream at critical low flow (if applicable): Unknown mg/l of CaCO₃

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

 Form Approved 1/14/99
 OMB Number 2040-0086

RECEIVED

OCT 13 2011

DEQ-NRO
A.11. Description of Treatment.

a. What levels of treatment are provided? Check all that apply.

☐ Primary

☒ Secondary

☐ Advanced

☒ Other. Describe:

Wetland Polishing

b. Indicate the following removal rates (as applicable):

 Design BOD₅ removal or Design CBOD₅ removal 90 %

 Design SS removal 90 %

 Design P removal 90 %

 Design N removal NA %

 Other TKN Reduction 90 %

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

Chlorination

If disinfection is by chlorination, is dechlorination used for this outfall?

☒

Yes

☐ No

d. Does the treatment plant have post aeration?

☒

Yes

☐ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

 Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.1	s.u.			
pH (Maximum)	8.3	s.u.			
Flow Rate	0.005	mgd	0.002	mgd	365
Temperature (Winter)	22	Degrees C	10	Degrees C	181
Temperature (Summer)	27	Degrees C	22	Degrees C	152

* For pH please report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		

CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.

BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5							
	CBOD-5	10	mg/	3.0	mg/l	12	5210 B	2
FECAL COLIFORM		23.5	n/100 ml	6.89	n/100 ml	25	IDEXX-Colilert	1
TOTAL SUSPENDED SOLIDS (TSS)		25.0	mg/l	6.0	mg/l	13	2540 D	1

END OF PART A.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

NA - Part B

< 0.1 mgd

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day). NA

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

B.1. Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

_____ gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

- The area surrounding the treatment plant, including all unit processes.
- The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- Each well where wastewater from the treatment plant is injected underground.
- Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.
- If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g., chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ____ Yes ____ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

Telephone Number: _____

Responsibilities of Contractor: _____

B.5. Scheduled Improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

- List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

- Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

____ Yes ____ No

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

- c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

- d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule	Actual Completion
	MM / DD / YYYY	MM / DD / YYYY
- Begin construction	___/___/___	___/___/___
- End construction	___/___/___	___/___/___
- Begin discharge	___/___/___	___/___/___
- Attain operational level	___/___/___	___/___/___

- e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ____Yes ____No

Describe briefly: _____

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: _____

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)							
CHLORINE (TOTAL RESIDUAL, TRC)							
DISSOLVED OXYGEN							
TOTAL KJELDAHL NITROGEN (TKN)							
NITRATE PLUS NITRITE NITROGEN							
OIL and GREASE							
PHOSPHORUS (Total)							
TOTAL DISSOLVED SOLIDS (TDS)							
OTHER							

END OF PART B.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086**BASIC APPLICATION INFORMATION****PART C. CERTIFICATION**

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:



Basic Application Information packet

Supplemental Application Information packet:

☐ Part D (Expanded Effluent Testing Data)☐ Part E (Toxicity Testing: Biomonitoring Data)☐ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)☐ Part G (Combined Sewer Systems)**ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title Kenneth Dotson, OwnerLora Dotson, Owner

Signature

Telephone number (540) 840-5335

Date signed

9/12/11

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

FACILITY NAME AND PERMIT NUMBER:

Form Approved 1/14/99
OMB Number 2040-0086

Locust Grove Town Center STP - VA0091961

SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA NA

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		

METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.

ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM											
COPPER											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (AS CaCO ₃)											

Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.

FACILITY NAME AND PERMIT NUMBER:
Locust Grove Town Center STP - VA0091961

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

[illegible]

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

[illegible]

Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.

[illegible]

ACID-EXTRACTABLE COMPOUNDS

[illegible]

Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.

[illegible]

BASE-NEUTRAL COMPOUNDS.

[illegible]

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

[illegible]

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE											
FLUORENE											
HEXACHLOROBENZENE											
HEXACHLOROBUTADIENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXACHLOROETHANE											
INDENO(1,2,3-CD)PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI- METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											

Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.

Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.

END OF PART D.**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

FACILITY NAME AND PERMIT NUMBER:

Form Approved 1/14/99
OMB Number 2040-0086

Locust Grove Town Center STP - VA0091961

SUPPLEMENTAL APPLICATION INFORMATION

PART E. TOXICITY TESTING DATA NA

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

E.1. Required Tests.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

____ chronic ____ acute

E.2. Individual Test Data. Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

Test number: _____ Test number: _____ Test number: _____

a. Test information.

Test species & test method number			
Age at initiation of test			
Outfall number			
Dates sample collected			
Date test started			
Duration			

b. Give toxicity test methods followed.

Manual title			
Edition number and year of publication			
Page number(s)			

c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.

24-Hour composite			
Grab			

d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)

Before disinfection			
After disinfection			
After dechlorination			

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

Test number: _____

Test number: _____

Test number: _____

e. Describe the point in the treatment process at which the sample was collected.

Sample was collected:

f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.

Chronic toxicity

Acute toxicity

g. Provide the type of test performed.

Static

Static-renewal

Flow-through

h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.

Laboratory water

Receiving water

i. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.

Fresh water

Salt water

j. Give the percentage effluent used for all concentrations in the test series.

k. Parameters measured during the test. (State whether parameter meets test method specifications)

pH

Salinity

Temperature

Ammonia

Dissolved oxygen

l. Test Results.

Acute:

Percent survival in 100%
effluent

%

%

%

LC₅₀

95% C.I.

%

%

%

Control percent survival

%

%

%

Other (describe)

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

Chronic:

NOEC	%	%	%
IC ₂₅	%	%	%
Control percent survival	%	%	%
Other (describe)			

m. Quality Control/Quality Assurance.

Is reference toxicant data available?			
Was reference toxicant test within acceptable bounds?			
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			

E.3. Toxicity Reduction Evaluation. Is the treatment works involved in a Toxicity Reduction Evaluation?

____ Yes ____ No If yes, describe: _____

_____**E.4. Summary of Submitted Biomonitoring Test Information.** If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: _____ (MM/DD/YYYY)

Summary of results: (see instructions)

_____**END OF PART E.****REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.**

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086**SUPPLEMENTAL APPLICATION INFORMATION****PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES** NA

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

GENERAL INFORMATION:

F.1. Pretreatment Program. Does the treatment works have, or is it subject to, an approved pretreatment program?

___ Yes ___ No

F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. _____

b. Number of CIUs. _____

SIGNIFICANT INDUSTRIAL USER INFORMATION:

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. Significant Industrial User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: _____

Mailing Address: _____

F.4. Industrial Processes. Describe all of the industrial processes that affect or contribute to the SIU's discharge.

F.5. Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): _____

Raw material(s): _____

F.6. Flow Rate.

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

_____ gpd (___ continuous or ___ intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

_____ gpd (___ continuous or ___ intermittent)

F.7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits ___ Yes ___ No

b. Categorical pretreatment standards ___ Yes ___ No

If subject to categorical pretreatment standards, which category and subcategory?

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

☐ Yes ☐ No If yes, describe each episode.

RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:

F.9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe? ☐ Yes ☐ No (go to F.12.)

F.10. Waste Transport. Method by which RCRA waste is received (check all that apply):

☐ Truck ☐ Rail ☐ Dedicated Pipe

F.11. Waste Description. Give EPA hazardous waste number and amount (volume or mass, specify units).

EPA Hazardous Waste Number

Amount

Units

<u>EPA Hazardous Waste Number</u>	<u>Amount</u>	<u>Units</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:

F.12. Remediation Waste. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

☐ Yes (complete F.13 through F.15.) ☐ No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

F.13. Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

F.14. Pollutants. List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

F.15. Waste Treatment.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

☐ Yes ☐ No

If yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?

☐ Continuous ☐ Intermittent If intermittent, describe discharge schedule.

END OF PART F.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086**SUPPLEMENTAL APPLICATION INFORMATION****PART G. COMBINED SEWER SYSTEMS** NA

If the treatment works has a combined sewer system, complete Part G.

G.1. System Map. Provide a map indicating the following: (may be included with Basic Application Information)

- a. All CSO discharge points.
- b. Sensitive use areas potentially affected by CSOs (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems, and outstanding natural resource waters).
- c. Waters that support threatened and endangered species potentially affected by CSOs.

G.2. System Diagram. Provide a diagram, either in the map provided in G.1. or on a separate drawing, of the combined sewer collection system that includes the following information:

- a. Locations of major sewer trunk lines, both combined and separate sanitary.
- b. Locations of points where separate sanitary sewers feed into the combined sewer system.
- c. Locations of in-line and off-line storage structures.
- d. Locations of flow-regulating devices.
- e. Locations of pump stations.

CSO OUTFALLS:

Complete questions G.3 through G.6 once for each CSO discharge point.

G.3. Description of Outfall.

- a. Outfall number _____
- b. Location _____
(City or town, if applicable) (Zip Code) _____
(County) (State) _____
(Latitude) (Longitude) _____
- c. Distance from shore (if applicable) _____ ft.
- d. Depth below surface (if applicable) _____ ft.
- e. Which of the following were monitored during the last year for this CSO?
____ Rainfall ____ CSO pollutant concentrations ____ CSO frequency
____ CSO flow volume ____ Receiving water quality
- f. How many storm events were monitored during the last year? _____

G.4. CSO Events.

- a. Give the number of CSO events in the last year.
_____ events (____ actual or ____ approx.)
- b. Give the average duration per CSO event.
_____ hours (____ actual or ____ approx.)

FACILITY NAME AND PERMIT NUMBER:

Locust Grove Town Center STP - VA0091961

Form Approved 1/14/99
OMB Number 2040-0086

- c. Give the average volume per CSO event.

_____ million gallons (_____ actual or _____ approx.)

- d. Give the minimum rainfall that caused a CSO event in the last year.

_____ inches of rainfall

G.5. Description of Receiving Waters.

- a. Name of receiving water: _____

- b. Name of watershed/river/stream system: _____

United States Soil Conservation Service 14-digit watershed code (if known): _____

- c. Name of State Management/River Basin: _____

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): _____

G.6. CSO Operations.

Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shell fish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable State water quality standard).

END OF PART G.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.

LGTC INFLUENT RESULTS

MONTH	Year	BOD	TP	TKN
May	2010	380	9.92	73.5
June	2010	590	12.2	96
July	2010	>550	12	90

LGTC EFFLUENT RESULTS

MONTH	Year	BOD	TP	TKN
May	2010	<2	0.27	1.8
June	2010	<2	0.8	2.1
July	2010	<QL*	1.7	1.1

QL=2.0

Available influent data - 3 Months

Removal efficiency computed (assume Eff BOD = 2 due to < results

July BOD assumed to be 550 ppm.

OBSERVED REMOVAL

2010	May	June	July
BOD	99.47%	99.66%	99.64%
TP	97.28%	93.44%	85.83%
TKN	97.55%	97.81%	98.78%

RECEIVED
SEP 23
DEQ-NRO

VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM

SCREENING INFORMATION

This application is divided into four sections. Section A pertains to all applicants. The applicability of Sections B, C and D depends on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Does this facility generate sewage sludge? ☒ Yes ☐ No

Does this facility derive a material from sewage sludge? ☐ Yes ☒ No

If you answered "Yes" to either, complete Section B (Generation Of Sewage Sludge or Preparation Of A Material Derived From Sewage Sludge).

3. Does this facility apply sewage sludge to the land? ☐ Yes ☒ No

Is sewage sludge from this facility applied to the land? ☒ Yes ☐ No

If you answer "No" to all above, skip Section C.

If you answered "Yes" to either, answer the following three questions:

a. Does the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions?
☐ Yes ☒ No

b. Is sewage sludge from this facility placed in a bag or other container for sale or give-away for application to the land?
☐ Yes ☒ No

c. Is sewage sludge from this facility sent to another facility for treatment or blending? ☒ Yes ☐ No

If you answered "No" to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

If you answered "Yes" to a, b or c, skip Section C.

4. Do you own or operate a surface disposal site? ☐ Yes ☒ No

If "Yes", complete Section D (Surface Disposal).

FACILITY NAME: Locust Grove Town Center

VPDES PERMIT NUMBER: VA0091961

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

1. Facility Information.

- a. Facility name: Locust Grove Town Center
- b. Contact person: Kenneth & Lora Dotson
Title: Owners
Phone: (540) 840-5335
- c. Mailing address:
Street or P.O. Box: 33225 Constitution Highway
City or Town: Locust Grove State: VA Zip: 22508
- d. Facility location:
Street or Route #: 32301 Constitution Highway
County: Orange
City or Town: Locust Grove State: VA Zip: 22508
- e. Is this facility a Class I sludge management facility? Yes X No
- f. Facility design flow rate: 0.0045 mgd
- g. Total population served: 400
- h. Indicate the type of facility:
 Publicly owned treatment works (POTW)
X Privately owned treatment works
 Federally owned treatment works
 Blending or treatment operation
 Surface disposal site
 Other (describe):

- 2. Applicant Information.** If the applicant is different from the above, provide the following:

- a. Applicant name: Same
- b. Mailing address:
Street or P.O. Box: _____
City or Town: _____ State: _____ Zip: _____
- c. Contact person: _____
Title: _____
Phone: (_____) _____
- d. Is the applicant the owner or operator (or both) of this facility?
x owner _____ operator
- e. Should correspondence regarding this permit be directed to the facility or the applicant?
_____ facility x applicant Applicant is Owner - Mailing address is owner's address

3. Permit Information.

- a. Facility's VPDES permit number (if applicable): VA0091961
- b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:
- | Permit Number: | Type of Permit: |
|----------------|-----------------|
| <u>NA</u> | <u></u> |

FACILITY NAME: Locust Grove Town CenterVPDES PERMIT NUMBER: VA0091961

4. **Indian Country.** Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? ☐ Yes ☒ No If "Yes", describe:

5. **Topographic Map.** Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility:

- Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
- Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

6. **Line Drawing.** Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction.

7. **Contractor Information.** Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? ☒ Yes ☐ No

If "Yes", provide the following for each contractor (attach additional pages if necessary).

Name: American Tank

Mailing address:

Street or P.O. Box: P.O. Box 294

City or Town: Stafford State: VA Zip: 22555

Phone: (800) 360-1269

Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:

VDH RAHD-15

If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s). Septage Hauler

8. **Pollutant Concentrations.** Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old. NA - Material removed is transported to another facility for additional treatment

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic				
Cadmium				
Chromium				
Copper				
Lead				
Mercury				
Molybdenum				
Nickel				
Selenium				
Zinc				

FACILITY NAME: Locust Grove Town Center

VPDES PERMIT NUMBER: VA0091961

9. **Certification.** Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of the application you have completed and are submitting:

☒ Section A (General Information)

☒ Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)

☐ Section C (Land Application of Bulk Sewage Sludge)

☐ Section D (Surface Disposal)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name and official title Kenneth Dotson, Owner Lora Dotson, Owner

Signature *Kenneth Dotson* *Lora Dotson* Date Signed 9-12-11

Telephone number (540) 840-5335

Upon request of the department, you must submit any other information necessary to assess sewage sludge use or disposal practices at your facility or identify appropriate permitting requirements.

**SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION
OF A MATERIAL DERIVED FROM SEWAGE SLUDGE***Complete this section if your facility generates sewage sludge or derives a material from sewage sludge***1. Amount Generated On Site.**Total dry metric tons per 365-day period generated at your facility: 0.5 dry metric tons Est. Volume removed is
~3000 gal/3 months**2. Amount Received from Off Site.** If your facility receives sewage sludge from another facility for treatment, use or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary. NA

- a. Facility name: _____
- b. Contact Person: _____
Title: _____
Phone: (_____) _____
- c. Mailing address: _____
Street or P.O. Box: _____
City or Town: _____ State: _____ Zip: _____
- d. Facility location: _____
(not P.O. Box) _____
- e. Total dry metric tons per 365-day period received from this facility: _____ dry metric tons
- f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics:

3. Treatment Provided at Your Facility.

- a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?
____ Class A ____ Class B ☒ Neither or unknown
- b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge: No treatment provided - Septic tanks/ATUs & Contact tank are pumped.

- c. Which vector attraction reduction option is met for the sewage sludge at your facility? NA
____ Option 1 (Minimum 38 percent reduction in volatile solids)
____ Option 2 (Anaerobic process, with bench-scale demonstration)
____ Option 3 (Aerobic process, with bench-scale demonstration)
____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
____ Option 5 (Aerobic processes plus raised temperature)
____ Option 6 (Raise pH to 12 and retain at 11.5)
____ Option 7 (75 percent solids with no unstabilized solids)
____ Option 8 (90 percent solids with unstabilized solids)
____ None or unknown
- d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge: No treatment provided - Septic tanks/ATUs & Contact tank are pumped

- e. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities, including blending, not identified in a - d above: NA

FACILITY NAME: Locust Grove Town Center

VPDES PERMIT NUMBER: VA0091961

4. Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements and One of Vector Attraction Reduction Options 1-8 (EQ Sludge). NA

(If sewage sludge from your facility does not meet all of these criteria, skip Question 4.)

- a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land:
_____ dry metric tons
- b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away?
_____ Yes _____ No

5. Sale or Give-Away in a Bag or Other Container for Application to the Land. NA

(Complete this question if you place sewage sludge in a bag or other container for sale or give-away prior to land application. Skip this question if sewage sludge is covered in Question 4.)

- a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land: _____ dry metric tons
- b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.

6. Shipment Off Site for Treatment or Blending.

(Complete this question if sewage sludge from your facility is sent to another facility that provides treatment or blending. This question does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this question if the sewage sludge is covered in Questions 4 or 5. If you send sewage sludge to more than one facility, attach additional sheets as necessary.)

- a. Receiving facility name: Little Falls Run WWTF
- b. Facility contact: Michael Smith
Title: Assistant Director of Facilities/Operation
Phone: (540) 658-8620
- c. Mailing address:
Street or P.O. Box: 20 PGA Drive, Suite 201
City or Town: Stafford State: VA Zip: 22554
- d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility:
0.5 dry metric tons ~ 3,000 gallons septage/3 months
- e. List, on this form or an attachment, the receiving facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the receiving facility's sewage sludge use or disposal practices:
Permit Number: VA0076392 Type of Permit: VPDES
- f. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility?
☒ Yes _____ No
Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility?
_____ Class A ☒ Class B _____ Neither or unknown
Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge: Aerobic Digestion
- g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge? ☒ Yes _____ No
Which vector attraction reduction option is met for the sewage sludge at the receiving facility?
_____ Option 1 (Minimum 38 percent reduction in volatile solids)

- ☐ Option 2 (Anaerobic process, with bench-scale demonstration)
☐ Option 3 (Aerobic process, with bench-scale demonstration)
☒ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
☐ Option 5 (Aerobic processes plus raised temperature)
☐ Option 6 (Raise pH to 12 and retain at 11.5)
☐ Option 7 (75 percent solids with no unstabilized solids)
☐ Option 8 (90 percent solids with unstabilized solids)
☐ None unknown

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge: Aerobic Digestion

- h. Does the receiving facility provide any additional treatment or blending not identified in f or g above?
☐ Yes ☒ No

If "Yes", describe, on this form or another sheet of paper, the treatment processes not identified in f or g above:

- i. If you answered "Yes" to f, g or h above, attach a copy of any information you provide to the receiving facility to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G. NA - Septage
j. Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? ☐ Yes ☒ No

If "Yes", provide a copy of all labels or notices that accompany the product being sold or given away.

- k. Will the sewage sludge be transported to the receiving facility in a truck-mounted watertight tank normally used for such purposes? ☒ Yes ☐ No. If "No", provide description and specification on the vehicle used to transport the sewage sludge to the receiving facility.

Show the haul route(s) on a location map or briefly describe the haul route below and indicate the days of the week and the times of the day sewage sludge will be transported.

N on Route 20 to Route 3 - East on Route 3 to Plant
Pumping ~once/3 months- rotate septic tank PO so each is
pumped annually at minimum. Pumping weekdays 8AM - 5 PM

7. Land Application of Bulk Sewage Sludge. LGTC transports material offsite for final treatment & management

(Complete Question 7.a if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in Questions 4, 5 or 6. Complete Question 7.b, c & d only if you are responsible for land application of sewage sludge.)

- a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites:

 dry metric tons

- b. Do you identify all land application sites in Section C of this application? ☐ Yes ☐ No

If "No", submit a copy of the Land Application Plan (LAP) with this application (LAP should be prepared in accordance with the instructions).

- c. Are any land application sites located in States other than Virginia? ☐ Yes ☐ No

If "Yes", describe, on this form or on another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.

- d. Attach a copy of any information you provide to the owner or lease holder of the land application sites to comply with the "notice and necessary" information requirement of 9 VAC 25-31-530 F and/or H (Examples may be obtained in Appendix IV).

8. Surface Disposal. NA

(Complete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)

- a. Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal sites: _____ dry metric tons

- b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?
____ Yes ____ No

If "No", answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.

- c. Site name or number: _____

- d. Contact person: _____

Title: _____

Phone: (_____) _____

Contact is: ____ Site Owner ____ Site operator

- e. Mailing address:

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

- f. Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal site: _____ dry metric tons

- g. List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:

Permit Number: _____ Type of Permit: _____

9. Incineration. NA

(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)

- a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge incinerator: _____ dry metric tons

- b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?
____ Yes ____ No

If "No", answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.

- c. Incinerator name or number: _____

- d. Contact person: _____

Title: _____

Phone: (_____) _____

Contact is: ____ Incinerator Owner ____ Incinerator Operator

- e. Mailing address:

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

- f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: _____ dry metric tons

- g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing

FACILITY NAME: Locust Grove Town Center

VPDES PERMIT NUMBER: VA0091961

of sewage sludge at this incinerator:

Permit Number: _____ Type of Permit: _____

10. Disposal in a Municipal Solid Waste Landfill. NA

(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)

- a. Landfill name: _____
- b. Contact person: _____
Title: _____
Phone: (_____) _____
Contact is: _____ Landfill Owner _____ Landfill Operator
- c. Mailing address:
Street or P.O. Box: _____
City or Town: _____ State: _____ Zip: _____
- d. Landfill location.
Street or Route #: _____
County: _____
City or Town: _____ State: _____ Zip: _____
- e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill:
_____ dry metric tons
- f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:
Permit Number: _____ Type of Permit: _____

- g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill?
_____ Yes _____ No
- h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.? _____ Yes _____ No
- i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? _____ Yes _____ No
Show the haul route(s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported.

SECTION C. LAND APPLICATION OF BULK SEWAGE SLUDGE NA

Complete this section for sewage sludge that is land applied unless any of the following conditions apply:

- The sewage sludge meets the Table 1 ceiling concentrations, the Table 3 pollutant concentrations, Class A pathogen requirements and one of the vector attraction reduction options 1-8 (fill out B.4 instead) (EQ Sludge); or
- The sewage sludge is sold or given away in a bag or other container for application to the land (fill out B.5 instead); or
- You provide the sewage sludge to another facility for treatment or blending (fill out B.6 instead).

Complete Section C for every site on which the sewage sludge that you reported in B.7 is land applied.

1. Identification of Land Application Site.

- a. Site name or number: _____
- b. Site location (Complete i and ii)
 - i. Street or Route#: _____
County: _____
City or Town: _____ State: _____ Zip: _____
 - ii. Latitude: _____ Longitude: _____
Method of latitude/longitude determination
_____ USGS map _____ Filed survey _____ Other
- c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

2. Owner Information.

- a. Are you the owner of this land application site? _____ Yes _____ No
- b. If "No", provide the following information about the owner:
Name: _____
Street or P.O. Box: _____
City or Town: _____ State: _____ Zip: _____
Phone: (_____) _____

3. Applier Information:

- a. Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site?
_____ Yes _____ No
- b. If "No", provide the following information for the person who applies the sewage sludge:
Name: _____
Street or P.O. Box: _____
City or Town: _____ State: _____ Zip: _____
Phone: (_____) _____
- c. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the person who applies sewage sludge to this land application site:
Permit Number: _____ Type of Permit: _____

4. Site Type. Identify the type of land application site from among the following:

_____ Agricultural land _____ Reclamation site _____ Forest
_____ Public contact site _____ Other (describe _____)

5. Vector Attraction Reduction.

Are any vector attraction reduction requirements met when sewage sludge is applied to the land application site?

FACILITY NAME: Locust Grove Town Center

VPDES PERMIT NUMBER: VA0091961

☐ Yes ☐ No If "Yes", answer a and b.

a. Indicate which vector attraction reduction option is met:

☐ Option 9 (Injection below land surface)

☐ Option 10 (Incorporation into soil within 6 hours)

b. Describe, on this form or on another sheet of paper, any treatment processes used at the land application site to reduce the vector attraction properties of sewage sludge:

6. Cumulative Loadings and Remaining Allotments.

(Complete Question 6 only if the sewage sludge applied to this site since July 20, 1993 is subject to the cumulative pollutant loading rates (CPLRs) - see instructions.)

a. Have you contacted DEQ or the permitting authority in the state where the sewage sludge subject to the CPLRs will be applied to ascertain whether bulk sewage sludge subject to the CPLRs has been applied to this site since July 20, 1993? ☐ Yes ☐ No

If "No", sewage sludge subject to the CPLRs may not be applied to this site.

If "Yes", provide the following information:

Permitting authority: _____

Contact person: _____

Phone: (_____) _____

b. Based upon this inquiry, has bulk sewage sludge subject to the CPLRs been applied to this site since July 20, 1993? ☐ Yes ☐ No If "No", skip the rest of Question 6. If "Yes", answer questions c - e.

c. Site size, in hectares: _____ (one hectare = 2.471 acres)

d. Provide the following information for every facility other than yours that is sending or has sent sewage sludge subject to the CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.

Facility name: _____

Facility contact: _____

Title: _____

Phone: (_____) _____

Mailing address.

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

e. Provide the total loading and allotment remaining, in kg/hectare, for each of the following pollutants:

	Cumulative loading	Allotment remaining
Arsenic	_____	_____
Cadmium	_____	_____
Copper	_____	_____
Lead	_____	_____
Mercury	_____	_____
Nickel	_____	_____
Selenium	_____	_____
Zinc	_____	_____

Complete Questions 7-12 below only if you apply sewage sludge, or you are responsible for land application of sewage sludge. Information required by these questions may be prepared as attachments to this form. Skip the following questions if you contract land application to someone else (as indicated under Section A.7) who is responsible for the operation.

7. **Sludge Characterization.** Use the table below or a separate attachment, provide at least one analysis for each parameter.

PCBs (mg/kg)	_____
pH (S. U.)	_____
Percent Solids (%)	_____
Ammonium Nitrogen (mg/kg)	_____
Nitrate Nitrogen (mg/kg)	_____
Total Kjeldahl Nitrogen (mg/kg)	_____
Total Phosphorus (mg/kg)	_____
Total Potassium (mg/kg)	_____
Alkalinity as CaCO ₃ * (mg/kg)	_____

* Lime treated sludge (10% or more lime by dry weight) should be analyzed for percent CaCO₃.

8. **Storage Requirements.**

Existing and proposed sludge storage facilities must provide an estimated annual sludge balance on a monthly basis incorporating such factors as storage capacity, sludge production and land application schedule. Include pertinent calculations justifying storage requirements.

Proposed sludge storage facilities must also provide the following information:

- a. A sludge storage site layout on a 7.5 minute topographic quadrangle or other appropriate scaled map to show the following topographic features of the surrounding landscape to a distance of 0.25 mile. Clearly mark the property line.
 - 1) Water wells, abandoned or operating
 - 2) Surface waters
 - 3) Springs
 - 4) Public water supply(s)
 - 5) Sinkholes
 - 6) Underground and/or surface mines
 - 7) Mine pool (or other) surface water discharge points
 - 8) Mining spoil piles and mine dumps
 - 9) Quarry(s)
 - 10) Sand and gravel pits
 - 11) Gas and oil wells
 - 12) Diversion ditch(s)
 - 13) Agricultural drainage ditch(s)
 - 14) Occupied dwellings, including industrial and commercial establishments
 - 15) Landfills or dumps
 - 16) Other unlined impoundments
 - 17) Septic tanks and drainfields
 - 18) Injection wells
 - 19) Rock outcrops
- b. A topographic map of sufficient detail to clearly show the following information:
 - 1) Maximum and minimum percent slopes
 - 2) Depressions on the site that may collect water
 - 3) Drainageways that may attribute to rainfall run-on to or runoff from this site
 - 4) Portions of the site (if any) which are located with the 100-year floodplain and how the storage facility will be protected from flooding
- c. Data and specifications for the storage facility lining material.
- d. Plan and cross-sectional views of the storage facility.
- e. Depth from the bottom of the storage facility to the seasonal high water table and separation distance to the permanent water table.

9. **Land Area Requirements.** Provide calculations justifying the land area requirements for land application of sewage

sludge taking into consideration average soil productivity group, crop(s) to be grown and most limiting factor(s) of the sewage sludge, specifically Plant Available Nitrogen (PAN), Calcium Carbonate Equivalence (CCE), and metal loadings (CPLR sewage sludge only), where applicable. Relate PAN, CCE, and metal loadings to demonstrate the most limiting factor for land application.

10. **Landowner Agreement Forms.** Provide a properly completed Sewage Sludge Application Agreement Form (attached) for each landowner if sewage sludge is to be applied onto land not owned by the applicant.

11. **Ground Water Monitoring.**

Are any ground water monitoring data available for this land application site? ☐ Yes ☐ No

If "Yes", submit the ground water monitoring data with this permit application. Also submit a written description of the well locations, approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.

12. **Land Application Site Information.**

(Complete Items a-d for sites receiving infrequent application - land application of sewage sludge up to the agronomic rate at a frequency of once in a 3 year period; complete Items a-h for sites receiving frequent application - land application of sewage sludge in excess of 70% the agronomic rate at a frequency greater than once in a 3 year period)

- a. Provide a general location map for each county which clearly indicates the location of all the land application sites.
- b. For each land application site provide a site plan of sufficient detail to clearly show the concerned landscape features and associated buffer zones (See instructions). Provide a legend for each landscape feature and the net acreage for each field taking into account the proposed buffer zones.
- c. In order to ensure that land application of bulk sewage sludge will not impact federally listed threatened or endangered species or federally designated critical habitat, the applicant must notify the field office of the U. S. Department of the Interior, Fish and Wildlife Service (FWS), by a letter, the proposed land application activities with the identification of the land application sites. The address and phone number of FWS are provided below.

U.S. Fish and Wildlife Service
Virginia Field Office
P.O. Box 480
White Marsh, VA 23183
TEL: (804) 693-6694

Provide a copy of the notification letter with this application form.

- d. Provide a soil survey map, preferably photographically based, with the field boundaries clearly marked. (A USDA-SCS soil survey map should be provided, if available.)

Provide a detailed legend for each soil survey map which uses accepted USDA-SCS descriptions of the typifying pedon for each soil series (soil type). Complex associations may be described as a range of characteristics. Soil descriptions shall include as a minimum the following information.

- 1) Soil symbol
- 2) Soil series, textural phase and slope range
- 3) Depth to seasonal high water table
- 4) Depth to bedrock
- 5) Estimated soil productivity group (for the proposed crop rotation)

Item e - h are required for sites receiving frequent application of sewage sludge

- e. In order to verify the information provided in item d, characterize the soil at each land application site. Representative soil borings or test pits to a depth of five feet or to bedrock if shallower, are to be coordinated for the typifying pedon of each soil series (soil type). Soil descriptions shall include as a minimum the following information:

- 1) Soil symbol
- 2) Soil series, textural phase and slope range
- 3) Depth to seasonal high water table
- 4) Depth to bedrock
- 5) Estimated soil productivity group (for the proposed crop rotation)

- f. Collect and analyze soil samples from each field, weighted to best represent each of the soil borings performed for Item e. Using the table below or a separate attachment, provide at least one analysis per sample for each of the

FACILITY NAME: Locust Grove Town Center

VPDES PERMIT NUMBER: VA0091961

following parameters.

Soil Organic Matter (%)	_____
Soil pH (std. units)	_____
Cation Exchange Capacity (meq/100g)	_____
Total Nitrogen (ppm)	_____
Organic Nitrogen (ppm)	_____
Ammonia Nitrogen (ppm)	_____
Nitrate Nitrogen (ppm)	_____
Available Phosphorus (ppm)	_____
Exchangeable Potassium (mg/100g)	_____
Exchangeable Sodium (mg/100g)	_____
Exchangeable Calcium (mg/100g)	_____
Exchangeable Magnesium (mg/100g)	_____
Arsenic (ppm)	_____
Cadmium (ppm)	_____
Copper (ppm)	_____
Lead (ppm)	_____
Mercury (ppm)	_____
Molybdenum (ppm)	_____
Nickel (ppm)	_____
Selenium (ppm)	_____
Zinc (ppm)	_____
Manganese (ppm)	_____
Particle Size Analysis or USDA Textural Estimate (%)	_____

- g. Relate the crop nutrient needs to anticipated yields, soil productivity rating and the various fertilizer or nutrient sources from sludge and chemical fertilizers. Describe any specialized agronomic management practices which may be required as a result of high soil pH. If the sludge is expected to possess an unusually high CCE or other unusual properties, provide a description of any plant tissue testing, supplemental fertilization or intensive agronomic management practices which may be necessary.
- h. Using a narrative format and referencing any related charts, describe the proposed cropping system. Show how the crop rotation and management will be coordinated with the design of the land application system. Include any supplemental fertilization program, soil testing and the coordination of tillage practices, planting and harvesting schedules and timing of land application.

SEWAGE SLUDGE APPLICATION AGREEMENT

This sewage sludge application agreement is made on this date _____ between _____, referred to here as "landowner", and _____, referred to here as the "Permittee".

Landowner is the owner of agricultural land shown on the map attached as Exhibit A and designated there as _____ ("landowner's land"). Permittee agrees to apply and landowner agrees to comply with certain permit requirements following application of sewage sludge on landowner's land in amounts and in a manner authorized by VPDES permit number _____ which is held by the Permittee.

Landowner acknowledges that the appropriate application of sewage sludge will be beneficial in providing fertilizer and soil conditioning to the property. Moreover, landowner acknowledges having been expressly advised that, in order to protect public health, the following site restrictions must be adhered to when sewage sludge receives Class B treatment for pathogen reduction:

1. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge;
2. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil;
3. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil;
4. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge;
5. Animals shall not be grazed on the land for 30 days after application of sewage sludge;
6. Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the State Water Control Board;
7. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge;
8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
9. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of sewage sludge borne cadmium equal to or exceeding 0.5 kilograms/hectare (0.45 pounds/acre).

Permittee agrees to notify landowner or landowner's designee of the proposed schedule for sewage sludge application and specifically prior to any particular application to landowner's land. This agreement may be terminated by either party upon written notice to the address specified below.

Landowner:

Permittee:

Signature_____
Signature_____
Mailing Address_____
Mailing Address

SECTION D. SURFACE DISPOSAL NA

Complete this section only if you own or operate a surface disposal site. Provide the information for each active sewage sludge unit.

1. Information on Active Sewage Sludge Units.

- a. Unit name or number: _____
- b. Unit location
- i. Street or Route#: _____
County: _____
City or Town: _____ State: _____ Zip: _____
- ii. Latitude: _____ Longitude: _____
Method of latitude/longitude determination
____ USGS map ____ Filed survey ____ Other
- c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.
- d. Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:
_____ dry metric tons.
- e. Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:
_____ dry metric tons.
- f. Does the active sewage sludge unit have a liner with a minimum hydraulic conductivity of 1×10^{-7} cm/sec?
____ Yes ____ No If "Yes", describe the liner or attach a description.

- g. Does the active sewage sludge unit have a leachate collection system? ____ Yes ____ No
If "Yes", describe the leachate collection system or attach a description. Also, describe the method used for leachate disposal and provide the numbers of any federal, state or local permits for leachate disposal:

- h. If you answered "No" to either f or g, answer the following:
Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site? ____ Yes ____ No If "Yes", provide the actual distance in meters: _____
- i. Remaining capacity of active sewage sludge unit, in dry metric tons: _____ dry metric tons
Anticipated closure date for active sewage sludge unit, if known: _____ (MM/DD/YYYY)
Provide with this application a copy of any closure plan developed for this active sewage sludge unit.

2. Sewage Sludge from Other Facilities.

Is sewage sludge sent to this active sewage sludge unit from any facilities other than yours? ____ Yes ____ No
If "Yes", provide the following information for each such facility, attach additional sheets as necessary.

- a. Facility name: _____
- b. Facility contact: _____
Title: _____
Phone: (_____) _____
- c. Mailing address: _____
Street or P.O. Box: _____
City or Town: _____ State: _____ Zip: _____

- d. List, on this form or an attachment, the facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the facility's sewage sludge management practices:

Permit Number: _____

Type of Permit: _____

- e. Which class of pathogen reduction is achieved before sewage sludge leaves the other facility?

_____ Class A _____ Class B _____ Neither or unknown

- f. Describe, on this form or on another sheet of paper, any treatment processes used at the other facility to reduce pathogens in sewage sludge: _____

- g. Which vector attraction reduction option is achieved before sewage sludge leaves the other facility?

_____ Option 1 (Minimum 38 percent reduction in volatile solids)

_____ Option 2 (Anaerobic process, with bench-scale demonstration)

_____ Option 3 (Aerobic process, with bench-scale demonstration)

_____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)

_____ Option 5 (Aerobic processes plus raised temperature)

_____ Option 6 (Raise pH to 12 and retain at 11.5)

_____ Option 7 (75 percent solids with no unstabilized solids)

_____ Option 8 (90 percent solids with unstabilized solids)

_____ None or unknown

- h. Describe, on this form or another sheet of paper, any treatment processes used at the other facility to reduce vector attraction properties of sewage sludge: _____

- i. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities performed by the other facility that are not identified in e - h above: _____

3. Vector Attraction Reduction.

- a. Which vector attraction reduction option, if any, is met when sewage sludge is placed on this active sewage sludge unit?

_____ Option 9 (Injection below land surface)

_____ Option 10 (Incorporation into soil within 6 hours)

_____ Option 11 (Covering active sewage sludge unit daily)

- b. Describe, on this form or another sheet of paper, any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge: _____

4. Ground Water Monitoring.

- a. Is ground water monitoring currently conducted at this active sewage sludge unit or are ground water monitoring data otherwise available for this active sewage sludge unit? _____ Yes _____ No

If "Yes", provide a copy of available ground water monitoring data. Also provide a written description of the well locations, the approximate depth to ground water, and the ground water monitoring procedures used to obtain these

FACILITY NAME: Locust Grove Town Center

VPDES PERMIT NUMBER: VA0091961

data.

- b. Has a ground water monitoring program been prepared for this active sewage sludge unit?
_____ Yes _____ No If "Yes", submit a copy of the ground water monitoring program with this application.
- c. Have you obtained a certification from a qualified ground water scientist that the aquifer below the active sewage sludge unit has not been contaminated? _____ Yes _____ No

If "Yes", submit a copy of the certification with this application.

5. Site-Specific Limits.

Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?

_____ Yes _____ No If "Yes", submit information to support the request for site-specific pollutant limits with this application.

FACILITY NAME: Locust Grove Town CenterVPDES PERMIT NUMBER: VA0091961

4. **Indian Country.** Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? Yes x No If "Yes", describe:

5. **Topographic Map.** Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility:

- Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
- Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

6. **Line Drawing.** Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction.

7. **Contractor Information.** Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? x Yes No

If "Yes", provide the following for each contractor (attach additional pages if necessary).

Name: Dabney & Crooks, Inc.

Mailing address:

Street or P.O. Box: P.O. Box 7783

City or Town: Fredericksburg State: VA Zip: 22404

Phone: (540) 373-0380

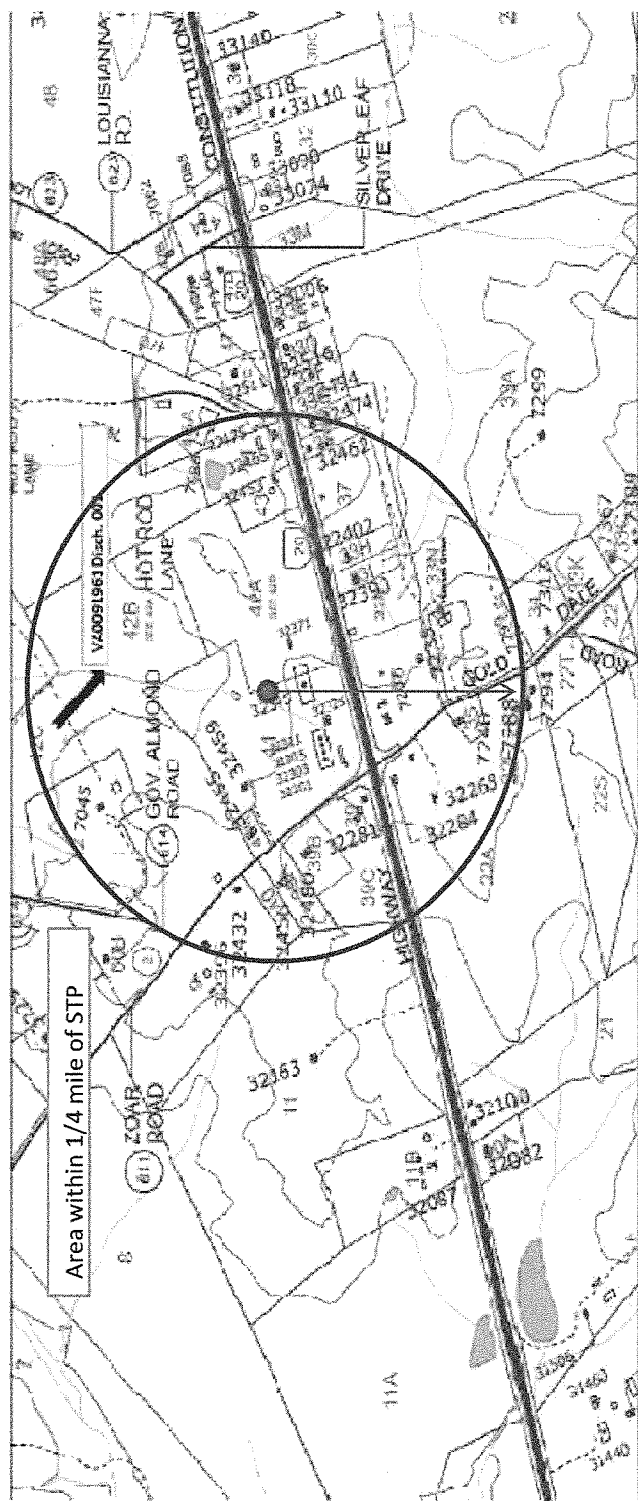
Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:

Contractor is treatment plant operator - Operator of Record is Doug Crooks Cert.# 367

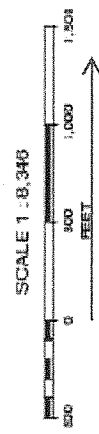
If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).

8. **Pollutant Concentrations.** Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old. NA - Material removed is transported to another facility for additional treatment

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic				
Cadmium				
Chromium				
Copper				
Lead				
Mercury				
Molybdenum				
Nickel				
Selenium				
Zinc				



Area within 1/4 mile of STP



RECEIVED
OCT 13 2016
DEQ-NRO

LGTC WASTEWATER TREATMENT OVERVIEW

